

UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF WISCONSIN

S.V. GOPALRATNAM,
HEMALATHA GOPALRATNAM,
THE ESTATE OF ARUN GOPALRATNAM, and
AMERICAN FAMILY MUTUAL INSURANCE
COMPANY,

Plaintiffs,

Civil Action File No. 13-CV-618

vs.

HEWLETT-PACKARD COMPANY,

Defendant and Third-Party Plaintiff,

and

ABC INSURANCE COMPANY,

Defendant,

vs.

SAMSUNG SDI CO., LTD., and
DYNAPACK TECHNOLOGY CORP.,

Third-Party Defendants.

BRIEF IN SUPPORT OF THIRD-PARTY DEFENDANT DYNAPACK TECHNOLOGY
CORPORATION'S MOTION TO EXCLUDE THE TESTIMONY OF DANIEL DOUGHTY

PROCEDURAL ISSUES

Third-Party Defendant DynaPack Technology Corporation ("DynaPack") files this Brief in Support of its Motion to Exclude the Testimony of Daniel Doughty pursuant to Federal Rule of Evidence 702. This Court should address all pending motions in a specific order to avoid ruling on moot issues. First, this Court should address the *Daubert* and summary judgment motions. If Plaintiffs' claims survive, this Court should next decide whether section 895.047 of

the Wisconsin Statutes applies in this case. If section 895.047 applies in this case, Plaintiffs may not recover any damages from DynaPack or HP under a theory of strict product liability because they were merely suppliers of the allegedly defective battery cell. If this is the case, this Court need not determine whether section 895.045(3) applies. Section 895.045(3)(d) is the subsection at issue and only becomes an issue if Plaintiffs can sue more than one defendant under the theory of strict product liability. Thus, the constitutional analysis would be moot.

DynaPack's assertion rests on the Court's duty to avoid issuing an advisory opinion:

[I]t is well established that the "case or controversy" requirement applies to declaratory judgments, just as it applies to every other kind of litigation in federal court. *See Powell*, 395 U.S. at 518, 89 S.Ct. 1944 ("The availability of declaratory relief depends on whether there is a live dispute between the parties. . . ."); *see also Tobin for Governor v. Ill. State Bd. of Elections*, 268 F.3d 517, 528 (7th Cir. 2001) (noting that a claim for declaratory judgment was moot where "relief . . . would have no impact on the parties to th[e] suit").

St. John's United Church of Christ v. Chicago, 502 F.3d 616 (7th Cir. 2007).

If the Court disposes of some or of the claims against the Defendants, any ruling from this Court on Plaintiffs' Motion for Declaratory Judgment would amount to an advisory opinion because the ruling would have no impact on the parties to this suit. As such, DynaPack respectfully asserts that the Court must address the *Daubert* and summary judgment motions before the Court addresses Plaintiffs' declaratory judgment motion.

INTRODUCTION

The Plaintiffs allege that the failure of an HP laptop caused a fire in the basement of Mr. and Mrs. Gopalratnam's home, resulting in the death of their son, Arun, and property damage to their home. Their home was insured by American Family Mutual Insurance Company. The Plaintiffs initially filed a negligence, strict product liability and breach of warranty action against

HP, the manufacturer of the laptop at issue in this case. The Plaintiffs later amended their complaint to allege negligence and strict liability claims against DynaPack, the manufacturer of the battery pack in the laptop, and SDI, the manufacturer of the lithium ion battery cells within the battery pack. To support their negligence and strict liability claims, the Plaintiffs rely in part upon the opinion of Daniel Doughty, an alleged battery expert. Mr. Doughty has opined that one of the lithium ion batteries in the laptop catastrophically failed and that the fire resulted when the battery expelled its contents.

Mr. Doughty's criticisms are limited to the lithium ion battery cells themselves. Mr. Doughty has not alleged DynaPack could have or should have discovered any alleged issue with the battery cells while they were under DynaPack's control. Mr. Doughty could find nothing wrong with, and has expressed no criticism of, the manufacturing or design of the battery pack, aside from his criticism of the battery cells. Plaintiffs' theory of recovery against DynaPack appears to be that DynaPack integrated allegedly defective battery cells into its product without the knowledge that the cells were defective.

SUMMARY OF THE ARGUMENT

This Court must exclude Mr. Doughty's testimony because it does not satisfy the reliability and relevancy requirements of Federal Rule of Evidence 702, the factors set forth in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), or the factors adopted by the Seventh Circuit in *Fuesting v. Zimmer, Inc. (Fuesting I)*, 421 F.3d 528, 534-35 (7th Cir. 2005), vacated in part on other grounds, 448 F.3d 936 (7th Cir. 2006). *See also Bielskis v. Louisville Ladder, Inc.*, 663 F.3d 887, 893-97 (7th Cir. 2011).

First, Mr. Doughty is not qualified to offer an opinion that a manufacturing defect, computer circuitry or both caused the fire in this case. Second, Mr. Doughty's conclusions are

based on his naked eye examination of the evidence and pure speculation rather than reliable principles and methods. Third, Mr. Doughty's testimony will not assist the trier of fact with a fact in issue. The Court must therefore exclude Mr. Doughty's testimony that the battery cells, whether isolated or incorporated into the battery pack, played any role in the Plaintiffs' house fire and death of their son.

FACTS

Background

On June 17, 2009, Arun Gopalratnam purchased an HP Mini 110 XP laptop. (Defendants' Joint Statement of Proposed Material Facts ¶1¹). The laptop included a battery pack manufactured by DynaPack. (*Id.* at ¶2.) The battery pack contained lithium ion battery cells manufactured by SDI. (*Id.* at ¶3.)

On June 4, 2010, a fire occurred at Mr. and Mrs. Gopalratnam's former residence ("the fire"). (*Id.* at ¶4.) Firefighters arrived at the residence and extinguished the fire. (*Id.* at ¶6.) Menomonee Falls Fire Chief, Jeffrey Hevey, notified the Gopalratnams that their son Arun had died in the fire. (*Id.* at ¶8.)

While at the Gopalratnam residence, fire personnel discovered some of the laptop remains and the remains of a cell phone located on a mattress in the basement bedroom. (*Id.* at ¶9.) They removed the cell phone and the laptop remains, which was missing the allegedly defective battery cell, from the basement bedroom and retained them as evidence. (*Id.* at ¶10.) Then, fire personnel tipped the mattress over, let the remaining debris from the mattress fall to the floor and shoveled all the fire debris from the basement bedroom out of the basement bedroom window into two large, unmarked debris piles. (*Id.* at ¶11.)

¹ For the convenience of the Court, the Defendants drafted a Joint Statement of Proposed Material Facts in support of their respective Motions for Summary Judgment. HP will file this document on behalf of Defendants. All references herein to the Joint Statement of Facts refer to this document.

During this process, fire personnel unknowingly shoveled the allegedly defective battery cell into one of the piles. (*Id.* at ¶12.) The allegedly defective cell was ultimately discovered buried in one of these large piles. (*Id.* at ¶13.) There is no evidence where the allegedly defective battery cell was located during the fire or after it was extinguished, before fire personnel shoveled the battery cell out of the window. (*Id.* at ¶14.)

On January 15, 2013, counsel for HP advised Plaintiffs' counsel that DynaPack manufactured the battery pack. (*Id.* at ¶25.) On March 25, 2013, Plaintiffs' counsel and representatives for American Family Insurance, HP, SDI, DynaPack, and Nokia attended a joint lab examination to examine the evidence recovered from the fire scene. (*Id.* at ¶26.) Mr. Doughty did not attend this examination. (*Id.*)

On June 4, 2013, exactly three years after the fire and five months after learning the identity of the battery pack manufacturer, Plaintiffs filed a Complaint against HP and its unidentified insurer. (*Id.* at ¶27.) Plaintiffs sought personal injury, property, and wrongful death damages based on claims of negligence, strict product liability, and breach of warranty. (*Id.* at ¶28.) Specifically, Plaintiffs alleged an internal failure of the lithium ion battery in the laptop caused the fire and resulting damages. (*Id.* at ¶29.)

On July 16, 2013, HP filed a Third-Party Complaint against DynaPack and SDI, seeking contribution in the event HP was found liable for Plaintiffs' injuries and damages. (*Id.* at ¶30.) On October 31, 2014, more than four years after the event set forth in the Complaint and more than 21 months after learning the identity of the battery pack manufacturer, Plaintiffs filed an Amended Complaint adding DynaPack and SDI as Defendants. (*Id.* at ¶31.) Plaintiffs sought personal injury, property damage, and wrongful death damages against SDI and DynaPack based

on claims of negligence and strict product liability. (*Id.* at ¶32.) Plaintiffs continued to theorize that the lithium ion battery in the laptop caused the fire and resulting damages. (*Id.* at ¶33.)

The battery cells in this case were not part of any recall. (*Id.* at ¶34.) SDI produced 100,000,000 cells per month as of April 2015. (*Id.* at ¶35.) The battery pack in this case was not part of any recall. (*Id.* at ¶36.) The laptop in this case was not part of any recall. (*Id.* at ¶37.)

Mr. Daniel Doughty

To support their claims, Plaintiffs retained Daniel Doughty as their proposed battery expert. (Affidavit of Dana K. Luczak (“Luczak Aff.”) at ¶2; Defs. Joint Facts Stmt. ¶38.) Mr. Doughty drafted a report dated June 30, 2015, wherein he opined that the laptop “failed catastrophically because of a fault internal to the [battery] cell that entered *thermal runaway* and ejected its contents.”² (*Id.*; emphasis added.) Mr. Doughty concluded the ejected battery contents were flaming and created a fire hazard. (Def. Joint Fact Stmt. ¶39.) Mr. Doughty further concluded, “the *internal fault* was caused by either a *manufacturing defect in the cell* that allowed for multiple seemingly normal cell charge/discharge cycles before causing an internal short circuit, or a *failure of the computer’s control/safety circuitry* to function as designed and prevent overcharging or over-discharging, leading to plating of lithium or some other metal, which in turn caused an internal short circuit in the cell, or *a combination of the two.*” (*Id.* at ¶40; emphasis added.) Mr. Doughty is not offering any design defect opinion in this case. (*Id.* at ¶41; Luczak Aff. ¶3 at p. 151:3-6.)

Mr. Doughty’s conclusions are based on his one hour examination of the laptop remains, an examination that he did not videotape or perform in the presence of representatives from the

² DynaPack refuses to acknowledge Mr. Doughty’s Supplemental Report because it was filed in violation of this Court’s Order. (*See* Dkt. 149.) A hearing on this issue is scheduled for July 29, 2016. Regardless of the outcome of this hearing, a supplemental report cannot remedy the issues outlined herein with Mr. Doughty’s qualifications and methodology.

defense, his review of materials submitted by the parties and his reliance on articles cited in his report. (*Id.* at pp. 14:6-25, 41-44.) Mr. Doughty was not present at nor did he watch a video of the original scene inspection. (*Id.* at pp. 87:24-88:3; Luczak Aff. ¶4.) Mr. Doughty did not perform any independent testing. (Luczak Aff. ¶3 at pp. 43:1-3.) Mr. Doughty did not make any calculations. (*Id.* at pp. 43:4-6)

Mr. Doughty's opinion contains three central conclusions: (1) one of the laptop's battery cells ("Cell A") entered thermal runaway; (2) an internal fault in Cell A caused the thermal runaway; and (3) either a manufacturing defect in Cell A or an issue with the computer circuitry or both caused Cell A's internal fault. (Luczak Aff. ¶2 at p. 1; Luczak Aff. ¶3 at p. 167.) Each conclusion is addressed in the following paragraphs.

Conclusion 1: Alleged Thermal Runaway

Mr. Doughty defined thermal runaway as, "the condition when the rate of heat generation inside the battery cell (due to chemical decomposition reactions involving cell materials) is greater than rate of heat dissipation." (Luczak Aff. ¶2 at p. 3.) Mr. Doughty conceded that if a battery does not contain sufficient charge, it cannot enter thermal runaway as a result of an internal defect. (Luczak Aff. ¶3 at pp. 63:10-13.) Mr. Doughty does not actually know how much charge would have been required for the SDI battery cells to reach thermal runaway in this case. (*Id.* at pp. 63:14-18.) Mr. Doughty also conceded that he would need to do further testing to determine how much charge would have been required for the SDI battery cells to reach thermal runaway in this case. (*Id.* at pp. 63:14-18.) Mr. Doughty acknowledged that he could have, but did not, purchase an exemplar version of the laptop to determine what charge would be required to initiate a thermal runaway event. (*Id.* at pp. 63:19-64:7.)

Mr. Doughty estimated, without any factual basis, that Cell A was at “a very high state of charge . . . somewhere from 90 to 100 percent” when it allegedly entered thermal runaway. (*Id.* at pp. 64:8-21.) Mr. Doughty was aware the laptop was not plugged in when the fire started, whenever and wherever the fire started inside the Gopalratnam residence. (*Id.* at pp. 94:16-21.) Mr. Doughty conceded it is more likely for a laptop to enter thermal runaway when the laptop is plugged in and actively charging than when it is unplugged, such as was the case here. (*Id.* at pp. 211:15-22.)

Mr. Doughty’s estimate that Cell A was 90 to 100 percent charged was based solely on his personal experience, published literature, and how Cell A looked to him post fire. (*Id.* at pp. 64:8-65:3.) Mr. Doughty alleged he can merely look at battery cells post fire and determine that the most damaged-looking cell caused the fire. (*Id.* at pp. 256:18-257:20.) Mr. Doughty testified that he thought literature existed to support his proposition, but he did not cite to the literature in his report nor could he recall the exact literature during his deposition. (*Id.*)

Conclusion 2: Alleged Internal Battery Cell Fault

Mr. Doughty assumed the alleged thermal runaway was caused by an internal battery cell fault: a hard short. (*Id.* at pp. 100:25-101:4.) According to Mr. Doughty, a hard short is a short circuit inside the electrode windings of a lithium-ion cell that is capable of carrying high current. (*Id.*) Mr. Doughty assumed a hard short occurred because he believed the evidence is consistent with a high current very rapid dissipation of the cell energy. (*Id.* at pp. 102:10-21.)

Mr. Doughty assumed only Cell A experienced a hard short because he believed Cell A reacted differently than Cells B and C. (*Id.* at pp. 84:2-89:9.) Mr. Doughty characterized this theory as the “differential damage” theory. (*Id.* at pp. 84:2-89:9.) Mr. Doughty concluded the differential damage was the following: Cell A was deformed, Cell A’s contents were explosively

projected, and Cell A's can was found away from what he believed was its "original" location on the bed. (*Id.* at p.118.) Each theory is addressed in the following paragraphs.

Cell Deformation

Mr. Doughty concluded that because Cell A was deformed and Cells B and C were not, only Cell A must have experienced a hard short followed by thermal runaway. (Luczak Aff. ¶2 at p. 7, 8.) Mr. Doughty based his conclusion on his reading of the *Mikolajczak* article, an article which he testified supported his belief that cells always react the same way when exposed to the same external heat source. (Luczak Aff. ¶3 at pp. 260:5-14, 275:15-276:8; *See* Luczak Aff. ¶5.) In other words, according to Mr. Doughty, if the battery cells in this case had entered thermal runaway because they were attacked by the fire, as opposed to being the alleged source of the fire, the *Mikolajczak* article stands for the proposition that all of the battery cells would have looked the same. (*See id.*)

Mr. George Thomas, PhD, a battery expert retained by SDI, testified that, contrary to Mr. Doughty's testimony, the battery cells in the *Mikolajczak* article reacted and looked differently after exposure to the same external heat source. (Luczak Aff. ¶6 at pp. 10-11.) Mr. Quinn Horn, PhD, a battery expert retained by HP, similarly testified that the cells in the *Sandia* article (another article upon which Mr. Doughty relied) also reacted and looked differently when exposed to the same external heat source. (Luczak Aff. ¶7 at pp. 101:14-102:24; *See* Luczak Aff. ¶8.) Accordingly, Mr. Horn concluded, "[t]he apparent distortion seen on Cell A (Figure 6) cannot be used to establish that Cell A had undergone a thermal runaway and caused the fire." (Luczak Aff. ¶9 at p. 11.) Mr. Thomas also noted that Mr. Doughty initially did not rule out the following obvious alternative explanation for Cell A's deformation: Cell A became deformed

during the post-fire clean-up and scene inspection when it was shoveled into a large pile of debris and debris was piled on top of it. (Luczak Aff. ¶6 at p. 11.)

Location of Cells

Mr. Doughty concluded Cell A must have been projected across the room as a result of a hard short and thermal runaway because it was found away from Cells B and C. (Luczak Aff. ¶3 at pp. 86:1-7.) However, Mr. Doughty conceded that the location of a battery cell post-fire is not indicative of where it was located before, during the fire or immediately after the fire. (*Id.* at pp. 85:6-86:13.) Mr. Doughty did not rule out the following obvious alternative explanation for the location of Cell A: Cell A was moved from its “original” location during fire suppression efforts. (*Id.*)

Ejection of Flaming Cell Contents

Mr. Doughty concluded that Cell A experienced a hard short rather than exposure to an external fire because he believes it is unlikely for a cell to expel its contents when exposed to external fire, and he believes all the cells would have expelled their contents if exposed to external fire. (Luczak Aff. ¶2 at pp. 2-4; Luczak Aff. ¶3 at pp. 217:20-218:11, 260:5-14, 275:15-276:8; Luczak Aff. ¶10 at p. 8.) Mr. Doughty relied on the *Mikolajczak* article to support his opinion. (*Id.*) Mr. Kevin White, PhD, a co-author of the *Mikolajczak* article, testified that the *Mikolajczak* article did not support Mr. Doughty’s conclusion. (Luczak Aff. ¶10 at pp. 9-10.) The article stands for the contrary proposition: lithium ion battery cells may or may not expel their contents when exposed to external fire. (*Id.*) Mr. White testified that one cannot conclude from the appearance of Cell A that it caused the fire. (*Id.*)

Mr. Horn agreed with Mr. White that Mr. Doughty misrepresented the conclusions within the *Mikolajczak* article. (Luczak Aff. ¶9 at pp. 14-17.) Mr. Horn also asserted that the

Santhanagopalan article on which Mr. Doughty relied does not “discuss the ejection of cell materials, or even infer that a thermal event initiated by an internal short circuit can lead to the ejection of cell materials from any lithium-ion cell. Simply put, the *Santhanagopalan* article does not support Doughty’s opinion in this regard.” (*Id.* at p. 15; Luczak Aff. ¶11.)

Conclusion 3: Manufacturing Defect/Computer Circuitry

Mr. Doughty referred to the *Mikolajczak* article in support of his theory that manufacturing defects can cause hard shorts months after the cells have been manufactured. (Luczak Aff. ¶2 at p. 6; Luczak Aff. ¶3 at pp. 106:3-108:7.) Mr. White clarified the article does not stand for Mr. Doughty’s proposition, and in fact, stands for the contrary proposition: “internal faults related to gross manufacturing defects usually occur very early in the life of the cell.” (Luczak Aff. ¶10 at p. 6.)

Mr. Doughty offered no opinion or explanation about the lithium ion 18650 battery cell and pack manufacturing processes. (Luczak Aff. ¶2; Defs. Joint Facts Stmt. ¶42) Mr. Doughty testified that he could not identify what manufacturing defect allegedly existed in this case because “the evidence was consumed in the fire”. (Luczak Aff. ¶3 at pp. 219:24-220:6; Defs. Joint Facts Stmt ¶43.) Instead, Mr. Doughty merely cited to a list of potential manufacturing defects and assumed that one or more defects must have existed in Cell A. (*Id.* at pp. 219:24-220:6; Luczak Aff. ¶2 at p. 6.) However, and most importantly, Mr. Doughty testified that he could not say to a reasonable degree of certainty whether there was any manufacturing or design defect in the **battery pack itself**. (Luczak Aff. ¶3 at p. 174:3-10; Defs. Joint Facts Stmt. ¶44.) Moreover, Mr. Doughty could not say to a reasonable degree of certainty that the design or manufacture of the battery pack played a role in the fire. (Luczak Aff. ¶3 at p.170; Defs. Joint Facts Stmt. ¶45.)

Mr. Doughty's curriculum vitae does not mention any experience with lithium ion battery cell or battery pack manufacturing. (Luczak Aff. ¶12.) His curriculum vitae mentions experience with performance testing and design of lithium batteries, expert witness and forensic consulting, market strategy, and various chemical applications. (*Id.*) Mr. Doughty has degrees in chemistry, but no educational background in manufacturing or engineering. (*Id.*) Mr. Doughty's experience with lithium ion battery cell manufacturing is limited to prototype manufacturing nearly a decade ago in 2006. (Luczak Aff. ¶3 at pp. 31:1-32:3.) Mr. Doughty last visited an industrial battery cell manufacturing facility over a decade ago in 2003 or 2004. (*Id.* at pp. 32:4-33:12.) Mr. Doughty conceded that battery cell manufacturing has changed and undergone continued improvement since then. (*Id.* at pp. 33:13-34-21.) Mr. Doughty has no knowledge regarding the lithium ion 18650 manufacturing processes at SDI or the battery pack manufacturing process at DynaPack, aside from the quality control information produced in this case, and he has no express criticism of the quality control testing. (*Id.* at pp. 37:5-39:25; 143:2-6; Defs. Joint Facts Stmt. ¶46.) Mr. Doughty has never been in a notebook computer manufacturing plant. (Luczak Aff. ¶3 at p. 40:1-3.)

Regarding the alleged issue with the computer circuitry, Mr. Doughty has no background in computers' control and/or safety circuitry. (*Id.* at p. 127:2-5.) Mr. Doughty conceded he is not qualified to review and understand battery pack circuitry or computer circuitry. (*Id.* at pp. 151:11-16.) Mr. Doughty has no theory how the multiple redundant independent safety features in the computer circuitry could have independently and simultaneously failed. (*Id.* at p. 170:1-14.) Finally, Mr. Doughty conceded he does not know how the computer and battery pack communicate with each another. (*Id.* at p. 127.)

ARGUMENT

I. THE COURT MUST EXCLUDE MR. DOUGHTY'S TESTIMONY UNDER FEDERAL RULE OF EVIDENCE 702 AND *DAUBERT*.

Federal Rule of Evidence 702 requires the Court to verify that proffered expert testimony is both reliable and relevant. *Id.*; *See also Daubert*, 509 U.S. at 589-95 (explaining the framework for evaluating expert testimony); *Kumho Tire Co., Ltd. v. Charmichael*, 526 U.S. 137, 141 (1999) (extending Rule 702 to all expert testimony and not just testimony based on scientific knowledge). Rule 702 states:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if:

- (a) the expert's scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue;
- (b) the testimony is based on sufficient facts or data;
- (c) the testimony is the product of reliable principles and methods; and
- (d) the expert has reliably applied the principles and methods to the facts of the case.

Rule 702 limitations on expert testimony can be pared down to three requirements: (1) whether the expert is qualified; (2) whether the expert's methodology is scientifically reliable; and (3) whether the testimony will "assist the trier of fact to understand the evidence or to determine a fact in issue." *Id.*; *Bielskis*, 663 F.3d at 893.

A. Mr. Doughty is not qualified to offer an opinion that a manufacturing defect, the computer circuitry, or both, caused an alleged thermal runaway in this case.

To determine whether an expert is qualified to provide an opinion, the Court must focus on whether the expert's "qualifications provide a foundation for [him or her] to answer a specific question." *Gayton v. McCoy*, 593 F.3d 610, 617 (7th Cir. 2010) (excluding testimony of a physician because he did not have specialized cardiac or pharmacological knowledge to support

his conclusion that the plaintiff's medication had a reasonable probability of saving her life if taken in the days before her death). The Court must "compar[e] the area in which the witness has superior knowledge, skill, experience, or education with the subject matter of the witness's testimony." *Carroll v. Otis Elevator Co.*, 896 F.2d 210, 212 (7th Cir. 1990) (admitting testimony of an experimental psychologist related to the attractiveness and accessibility of an elevator stop button to children).

Here, Mr. Doughty clearly intends on offering opinions that go well beyond the scope of his knowledge and experience. Mr. Doughty opined that Cell A had a manufacturing defect; however, Mr. Doughty had no knowledge how SDI manufactured battery cells or how DynaPack manufactured battery packs either in the past or the present. (Luczak Aff. ¶3 at pp. 33:13-34-21.) His knowledge is limited to the quality control testing performed by SDI and DynaPack after the battery cells and packs were already manufactured, *and he has no express criticism of the quality control testing.* (*Id.*) Mr. Doughty never analyzed or even discussed the specifics of the manufacturing process of a lithium ion 18650 battery cell or a battery pack, whether it be at SDI, DynaPack or elsewhere. Unsurprisingly, Mr. Doughty offered no suggestions as to what manufacturing defect occurred in this case, how it may have happened, which Defendant was responsible or how to fix it. (Luczak Aff. ¶¶2, 3.)

Additionally, Mr. Doughty's background, as outlined in his curriculum vitae, does not include experience or education in the area of manufacturing lithium ion 18650 batteries or battery packs. (Luczak Aff. ¶12.) Indeed, Mr. Doughty has no experience whatsoever with industrial scale manufacturing of lithium ion 18650 batteries. (Luczak Aff. ¶3 at pp. 31:1-32:3.) His experience is limited to prototype manufacturing, and that experience is more than ten years old. (*Id.*) Mr. Doughty even conceded that has not stepped foot inside an industrial lithium ion

manufacturing facility since 2003 or 2004 and has never observed the manufacturing processes of either DynaPack or SDI. (*Id.* at pp. 32:4-33:12; 37:5-39:25; 143:2-6.) Mr. Doughty's limited, out-of-date experience does not qualify him to render an expert opinion regarding SDI's or DynaPack's manufacturing processes.

Mr. Doughty's knowledge and experience lie in battery cell design and failure testing, not manufacturing. (Luczak Aff. ¶12.) His curriculum vitae contains several references to battery design and battery failure testing but never once mentions cell or battery pack manufacturing. (*Id.*) Mr. Doughty is missing experience, specialized knowledge and training in the critical stage of the development process: manufacturing. Without more, Mr. Doughty is not qualified to render an opinion that something went wrong with either the cell manufacturing at SDI or the battery pack manufacturing at DynaPack. Mr. Doughty cannot merely assume that something must have gone wrong at the manufacturing stage without any knowledge as to what actually goes on at that stage. Accordingly, Mr. Doughty is not qualified to render any opinion that SDI somehow improperly manufactured the battery cell or that DynaPack somehow improperly manufactured the battery pack.

As for the issue of computer circuitry, Mr. Doughty's curriculum vitae makes no reference to computers at all, let alone computer or battery pack circuitry. (Luczak Aff. ¶3 at p. 127:2-5.) Mr. Doughty has no education or experience in the field of computer or battery pack circuitry. (*Id.*) Mr. Doughty cannot read computer or battery pack circuitry. (*Id.* at pp. 151:11-16.) Mr. Doughty has no idea how the computer circuitry communicates with the battery pack circuitry. (*Id.* at p. 170:1-14.) Mr. Doughty similarly has no idea how the multiple redundant independent safety features in the computer circuitry could have independently and

simultaneously failed. (*Id.* at p. 127.) Accordingly, Mr. Doughty is not qualified to render any opinion regarding the computer or battery pack circuitry in this case.

As outlined above, Mr. Doughty is not qualified to render an opinion premised on alleged issues with the lithium ion 18650 manufacturing process or computer circuitry as he has no specialized knowledge or training regarding either. This Court should therefore exclude Mr. Doughty's testimony that Cell A entered thermal runaway due to an internal fault, which was caused by a manufacturing defect, an issue with the computer circuitry or both.

B. Mr. Doughty's methodology is haphazard and unreliable.

As stated above, Rule 702 requires the Court to verify that the expert's methodology is scientifically reliable. *Id.*; *Bielskis*, 663 F.3d at 893. *Daubert* set forth several non-exhaustive factors for the Court to consider when analyzing an expert's methodology:

- (1) whether the theory has been or is capable of being tested;
- (2) whether the theory has been subjected to peer review and publication;
- (3) the theory's known or potential rate of error; and
- (4) the theory's level of acceptance within the relevant community.

Id. at 593-594; *Bielskis*, 663 F.3d at 894.

In *Bielskis*, the court excluded the proffered expert testimony because it "sounded more like the sort of '[t]alking off the cuff' – without data or analysis – that we have repeatedly characterized as insufficient." *Id.* *Bielskis* was injured after falling from a mini-scaffold manufactured by the defendant. *Id.* at 890. To prove his product liability claims, *Bielskis* retained a mechanical engineer, Mr. Mizen. *Id.* at 891. Mr. Mizen concluded a caster stem on the mini-scaffold broke due to a brittle fracture, which he concluded had to be caused by overtightening a stud during the manufacturing process. *Id.* at 892.

When the court asked about his methodology, Mr. Mizen said that he relied on “basic engineering intelligence” and “solid engineering principles that any other engineer would use.” *Id.* at 894. However, Mr. Mizen cited to no articles that supported his opinion that the manufacturer’s overtightening somehow caused a brittle fracture that somehow caused the mini-scaffold to break. *Id.* at 895. Instead, Mr. Mizen examined the broken mini-scaffold for approximately one hour with his naked eye. *Id.* He did not measure the caster stem, he did not know what alloy was used to construct the caster stem, and he made no effort to quantify the strength of the caster stem. *Id.* at 894-895. Based on this methodology, the court concluded it was not possible to “assess the known or potential rate of error behind his methodology because he used no particular methodology to reach his conclusions . . . looking at the failed caster stem with his naked eye could not be subjected to peer review.” *Id.*

Similar to Mr. Mizen, Mr. Doughty’s testimony amounts to “[t]alking off the cuff – without data or analysis.” Like Mr. Mizen, Mr. Doughty pointed to nothing within the battery science community that supported his conclusions and underlying theories that Cell A must have experienced thermal runaway, that the thermal runaway had to have been caused by an internal cell fault (hard short) and that hard short must have been caused by a manufacturing defect or computer circuitry or both. Like Mr. Mizen, Mr. Doughty examined the laptop remains for approximately one hour. (Luczak Aff. ¶3 at pp. 14:6-25, 41-44.) He used no particular methodology and performed a naked eye examination. (*Id.*) He examined the laptop remains outside the presence of representatives of the defense. (*Id.*) The exam was not videotaped. (*Id.*) He performed no independent testing. (*Id.* at pp. 43:1-3.) He performed no calculations. (*Id.* at pp. 43:4-6.) Accordingly, his “methodology” cannot be subjected to peer review.

Additionally, Mr. Doughty confirmed that he could have purchased an exemplar version of the laptop in this case to confirm the charge required to initiate thermal runaway. (*Id.* at pp. 63:19-64:7.) He did not. (*Id.*) Consequently, Mr. Doughty does not actually know what charge the battery cells needed to enter thermal runaway in this case. (*Id.* at pp. 63:14-18.) Nonetheless, he is confident Cell A entered thermal runaway merely because of how it looked. (*Id.* at pp. 84:2-89:9; 100:25-101:4; 102:10-21; 118.) Mr. Doughty's methodology simply does not pass muster.

In addition to failing the above *Daubert* factors, Mr. Doughty's methodology fails to satisfy the following reliability factors adopted by the Seventh Circuit:

- (5) whether maintenance standards and controls exist;
- (6) whether the testimony relates to matters growing naturally and directly out of research they have conducted independent of litigation or developed expressly for purposes of testifying;
- (7) whether the expert has unjustifiably extrapolated from an accepted premise to an unfounded conclusion;
- (8) whether the expert has adequately accounted for obvious alternative explanations;
- (9) whether the expert is being as careful as he would be in his regular professional work outside his paid litigation consulting; and
- (10) whether the field of expertise claimed by the expert is known to reach reliable results for the type of opinion the expert would give.

Fuesting I, 421 F.3d at 534-35 (7th Cir. 2005). In *Fuesting I*, the plaintiff filed negligence and strict liability claims against the manufacturer of his knee implant. *Id.* at 531. He retained a proposed expert and litigation consultant, Mr. James Pugh, to support his claims. *Id.* Mr. Pugh opined the manufacturer's method of sterilization and the implant's time on the shelf caused the implant to fail. *Id.*

The court excluded Mr. Pugh's theories and conclusions regarding sterilization and shelf time because they did not satisfy the additional reliability factors. *Id.* at 536. Mr. Pugh did not satisfy factor five because he did not perform any tests or cite to any studies to verify his

opinion. *Id.* Mr. Pugh did not satisfy factor six because he developed his theories solely for the purpose of litigation. *Id.* Mr. Pugh did not satisfy factor seven because he extrapolated from basic principles of polymer science without actually bridging the analytical gap between the principles and facts of his case. *Id.* For example, he did not quantify the levels of radiation and oxidation required to set the alleged chemical reaction in motion. *Id.* Mr. Pugh failed to satisfy factor eight because he did not consider relevant variables such as how the implant reacts in certain situations and whether the specific implant was even capable of undergoing the alleged chain reaction. *Id.*

Like Mr. Pugh, Mr. Doughty's analysis fails the *Fuesting I* reliability factors. Mr. Doughty did not satisfy factor five because he performed no testing to confirm his differential cell theory. (Luczak Aff. ¶3 at pp. 43:1-3; 43:4-6; 63:19-64:7.) Mr. Doughty did not satisfy factor six because he cited to no articles that confirmed his theory that a cell's appearance and its location post fire can prove the existence of thermal runaway and manufacturing defects. No factfinder could possibly agree that the articles support Mr. Doughty's theory that battery cells react the same when exposed to an external heat source. The articles do not support Mr. Doughty's theory because he developed his theory for the purpose of this litigation.

Perhaps, the biggest failure with Mr. Doughty's testimony is that he did not satisfy factors seven and eight. Mr. Doughty unjustifiably extrapolated from an accepted premise: manufacturing defects can cause thermal runaway in lithium ion battery cells. Mr. Doughty did not "bridge the analytical gaps" between this accepted premise and his conclusions in this case. Mr. Doughty offered no opinion or explanation about the lithium ion 18650 battery cell and pack manufacturing processes. (Luczak Aff. ¶2, 3.) Mr. Doughty did not demonstrate a manufacturing defect existed in the battery cells. (Luczak Aff. ¶2 at p. 6; Luczak Aff. ¶3 at pp.

219:24-220:6; 219:24-220:6.) Mr. Doughty did not quantify the level of charge required for the battery cells to reach thermal runaway nor did he test an exemplar laptop to confirm whether the battery cells could have reached that charge while the laptop was unplugged. (*Id.* at pp. 63:14-18; 63:19-64:7; 63:14-18.) Mr. Doughty did not even confirm that thermal runaway occurred, regardless of cause.

Mr. Doughty also failed to account for obvious alternative explanations that completely undermine his theories. For example, Cell A may have ejected its contents after exposure to external flame, and Cell A could have been moved during fire suppression efforts or cleanup. (Luczak Aff. ¶3 at pp. 85:6-86:13; Luczak Aff. ¶9 at p. 12.) These alternative explanations are both reasonable and equally probable, and Mr. Doughty had no basis to disregard them.

Based on the evidence in this case, it is equally likely, perhaps more than equally likely, Cell A was damaged during fire suppression efforts. The cell was shoveled out a bedroom window into a giant debris pile and sat in that pile until it was discovered. Mr. Doughty would have this Court believe there is zero probability that the removal and clean-up methods or the sheer weight of the debris pile crushed Cell A. Mr. Doughty cannot rely on this type of junk science to rule out a perfectly reasonable and equally likely explanation for the appearance of Cell A.

Mr. Doughty's testimony also fails factors nine and ten. Regarding factor nine, Mr. Doughty's haphazard approach should demonstrate to the Court that he was not as careful as he normally would be or should be. With respect to factor ten, Mr. Doughty's lack of knowledge regarding industrial scale battery cell manufacturing process should demonstrate to the Court that someone with his experience, knowledge, and skill cannot reach reliable results concerning this issue.

C. Mr. Doughty's testimony will not assist the trier of fact with a fact in issue.

The final Rule 702 requirement is whether the proposed testimony will “assist the trier of fact to understand the evidence or to determine a fact in issue”. *Id.*; *Daubert*, 509 U.S. at 593; *Clark v. Takata Corp., Am. Honda Motor*, 192 F.3d 750 (7th Cir. 1999). In *Clark*, the plaintiff sustained a spinal cord injury during a motor vehicle accident. *Id.* at 752. Clark filed a product liability action against his seatbelt manufacturer based on his theory that the seatbelt was defective. *Id.* at 752-753. To prove his claim, the plaintiff retained an engineer, Dr. James Lafferty. Mr. Lafferty concluded (1) the seatbelt unbuckled during the rollover sequence and (2) a properly functioning seatbelt would have prevented Clark from moving upward four inches and striking the roof of the vehicle. *Id.* at 756.

The court excluded Mr. Lafferty's first conclusion because he assumed the very issue the plaintiff needed to prove in order to recover; he assumed the seatbelt was previously secure and unlatched during the collision. *Id.* at 757. Mr. Lafferty's conclusion would not assist the trier of fact because he had no evidence the seatbelt actually became unlatched during the collision. *Id.* He merely assumed it to be true. *Id.*

Worse than Mr. Lafferty, *all* of Mr. Doughty's conclusions are unproven assumptions. First, Mr. Doughty assumed Cell A entered thermal runaway based on its appearance and location relative to Cells B and C. (Luczak Aff. ¶3 at pp. 84:2-89:9; 118.) Yet, Mr. Doughty does not refute other explanations for Cell A's appearance and location. He is assuming Cell A entered thermal runaway. Second, Mr. Doughty assumed an internal short circuit (a hard short) caused the assumed thermal runaway. (*Id.* at pp. 100:25-101:4.) Yet, Mr. Doughty did not use any accepted theory to rule out whether an external heat source could have caused the assumed thermal runaway. Third, Mr. Doughty assumed a manufacturing defect caused the assumed hard

short. (Luczak Aff. ¶2 at p.1) Yet, Mr. Doughty had no idea about SDI or DynaPack's manufacturing processes or what alleged manufacturing defect was to blame. Mr. Doughty's testimony is a house of cards supported by assumptions. This Court, as the gatekeeper, cannot allow the trier of fact to rely on this type of speculative testimony.

For the above reasons, the Court should exclude Mr. Doughty's testimony that the battery cells, whether isolated or incorporated into the battery pack, played any role in causing the fire in this case.

CONCLUSION

Third-Party Defendant DynaPack Technology Corporation respectfully requests this Court grant its Motion to Exclude the Testimony of Daniel Doughty because his testimony does not satisfy the reliability and relevancy requirements of Federal Rule of Evidence 702, the factors set forth in *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993), or the factors adopted by the Seventh Circuit in *Fuesting v. Zimmer, Inc. (Fuesting I)*, 421 F.3d 528, 534-35 (7th Cir. 2005), vacated in part on other grounds, 448 F.3d 936 (7th Cir. 2006). *See also Bielskis v. Louisville Ladder, Inc.*, 663 F.3d 887, 893-97 (7th Cir. 2011).

Dated this 24th day of June 2016.

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